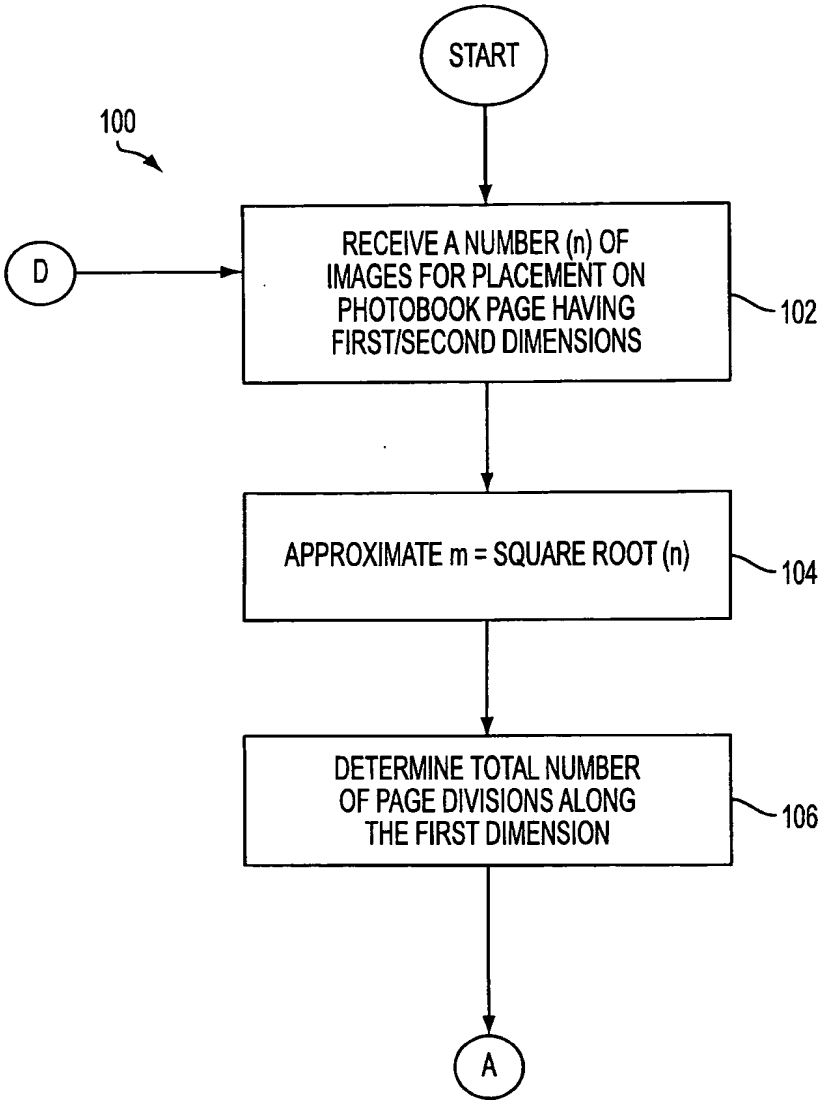
START
100
D
RECEIVE A NUMBER (n) OF IMAGES FOR PLACEMENT ON PHOTOBOOK PAGE HAVING FIRST/SECOND DIMENSIONS
102
APPROXIMATE m = SQUARE ROOT (n)
104
DETERMINE TOTAL NUMBER OF PAGE DIVISIONS ALONG THE FIRST DIMENSION
106
A

FIG. 1A

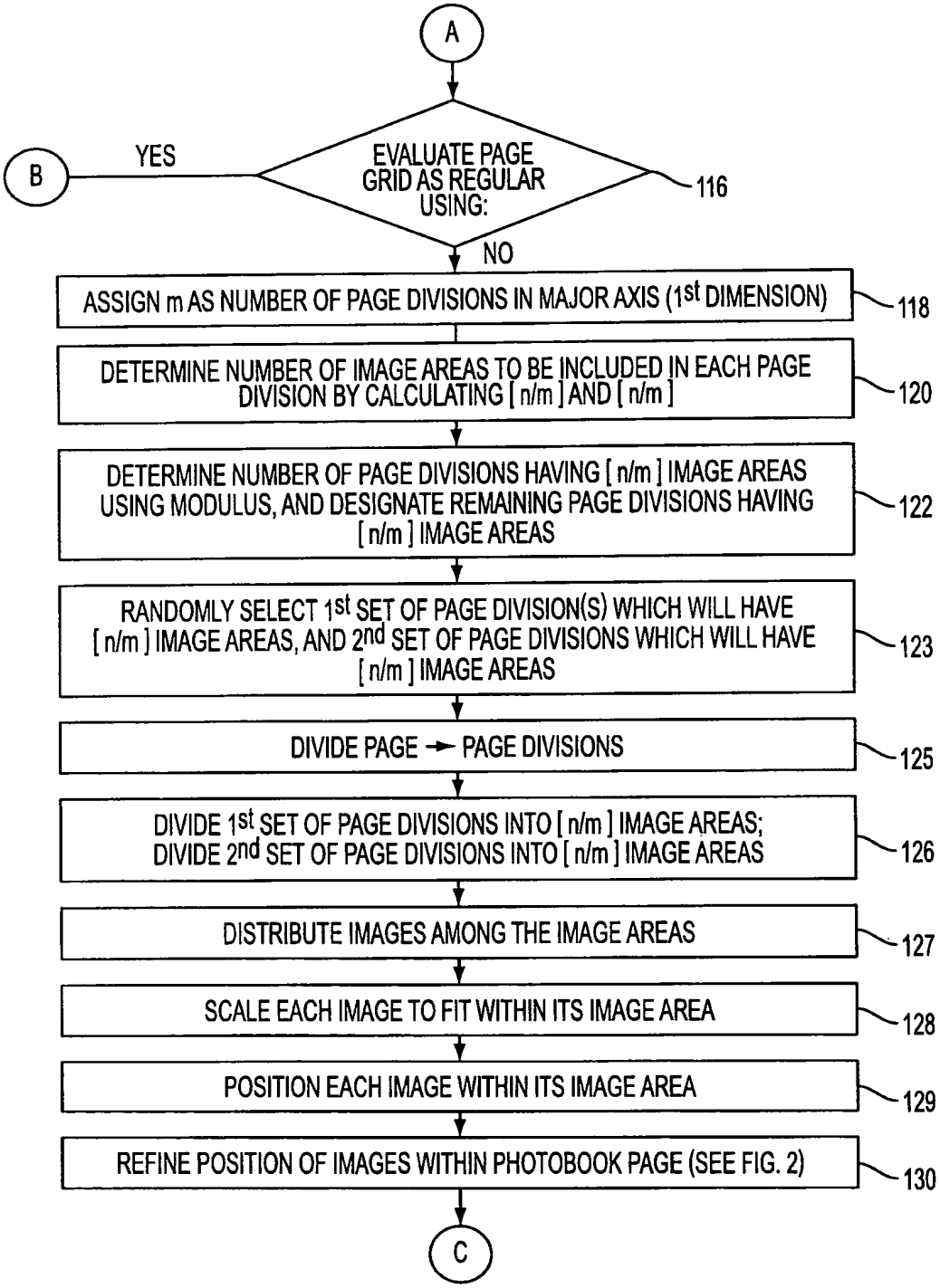
A
B
YES
EVALUATE PAGE GRID AS REGULAR USING:
116
NO
ASSIGN m AS NUMBER OF PAGE DIVISIONS IN MAJOR AXIS (1st DIMENSION)
118
DETERMINE NUMBER OF IMAGE AREAS TO BE INCLUDED IN EACH PAGE DIVISION BY CALCULATING [n/m] AND [n/m]
120
DETERMINE NUMBER OF PAGE DIVISIONS HAVING [n/m] IMAGE AREAS USING MODULUS, AND DESIGNATE REMAINING PAGE DIVISIONS HAVING [n/m] IMAGE AREAS
122
RANDOMLY SELECT 1st SET OF PAGE DIVISION(S) WHICH WILL HAVE [n/m] IMAGE AREAS, AND 2nd SET OF PAGE DIVISIONS WHICH WILL HAVE [n/m] IMAGE AREAS
123
DIVIDE PAGE → PAGE DIVISIONS
125
DIVIDE 1st SET OF PAGE DIVISIONS INTO [n/m] IMAGE AREAS; DIVIDE 2nd SET OF PAGE DIVISIONS INTO [n/m] IMAGE AREAS
126
DISTRIBUTE IMAGES AMONG THE IMAGE AREAS
127
SCALE EACH IMAGE TO FIT WITHIN ITS IMAGE AREA
128
POSITION EACH IMAGE WITHIN ITS IMAGE AREA
129
REFINE POSITION OF IMAGES WITHIN PHOTOBOOK PAGE (SEE FIG. 2)
130
C

FIG. 1B

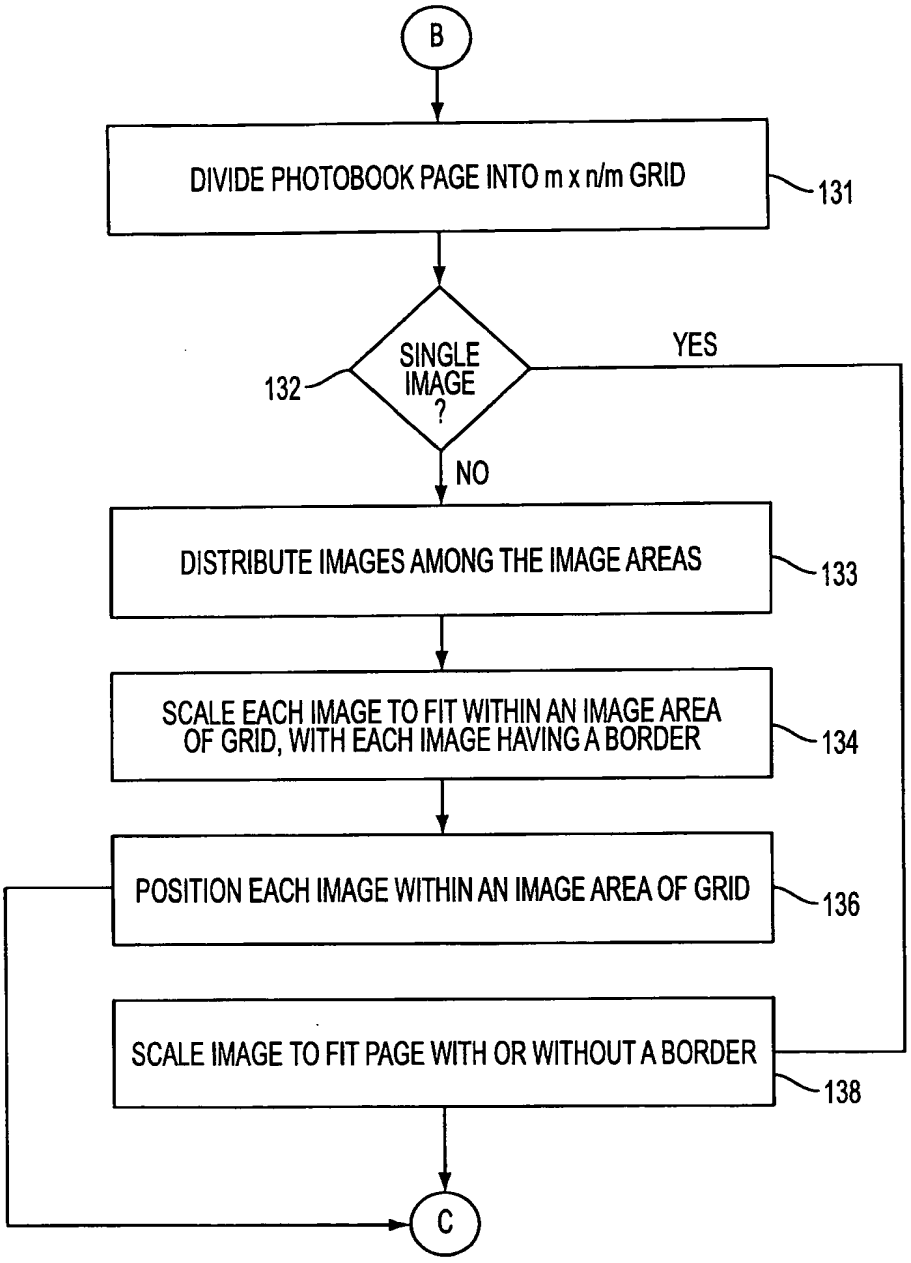
B
DIVIDE PHOTOBOOK PAGE INTO m x n/m GRID
131
SINGLE IMAGE ?
132
YES
NO
DISTRIBUTE IMAGES AMONG THE IMAGE AREAS
133
SCALE EACH IMAGE TO FIT WITHIN AN IMAGE AREA OF GRID, WITH EACH IMAGE HAVING A BORDER
134
POSITION EACH IMAGE WITHIN AN IMAGE AREA OF GRID
136
SCALE IMAGE TO FIT PAGE WITH OR WITHOUT A BORDER
138
C

FIG. 1C

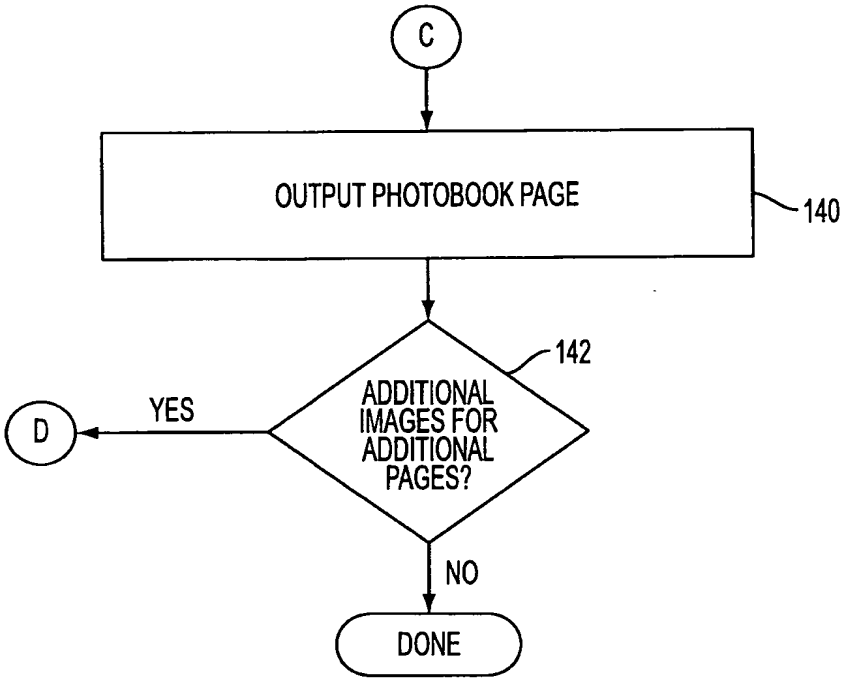
C
OUTPUT PHOTOBOOK PAGE
140
142
ADDITIONAL IMAGES FOR ADDITIONAL PAGES?
YES
D
NO
DONE

FIG. 1D

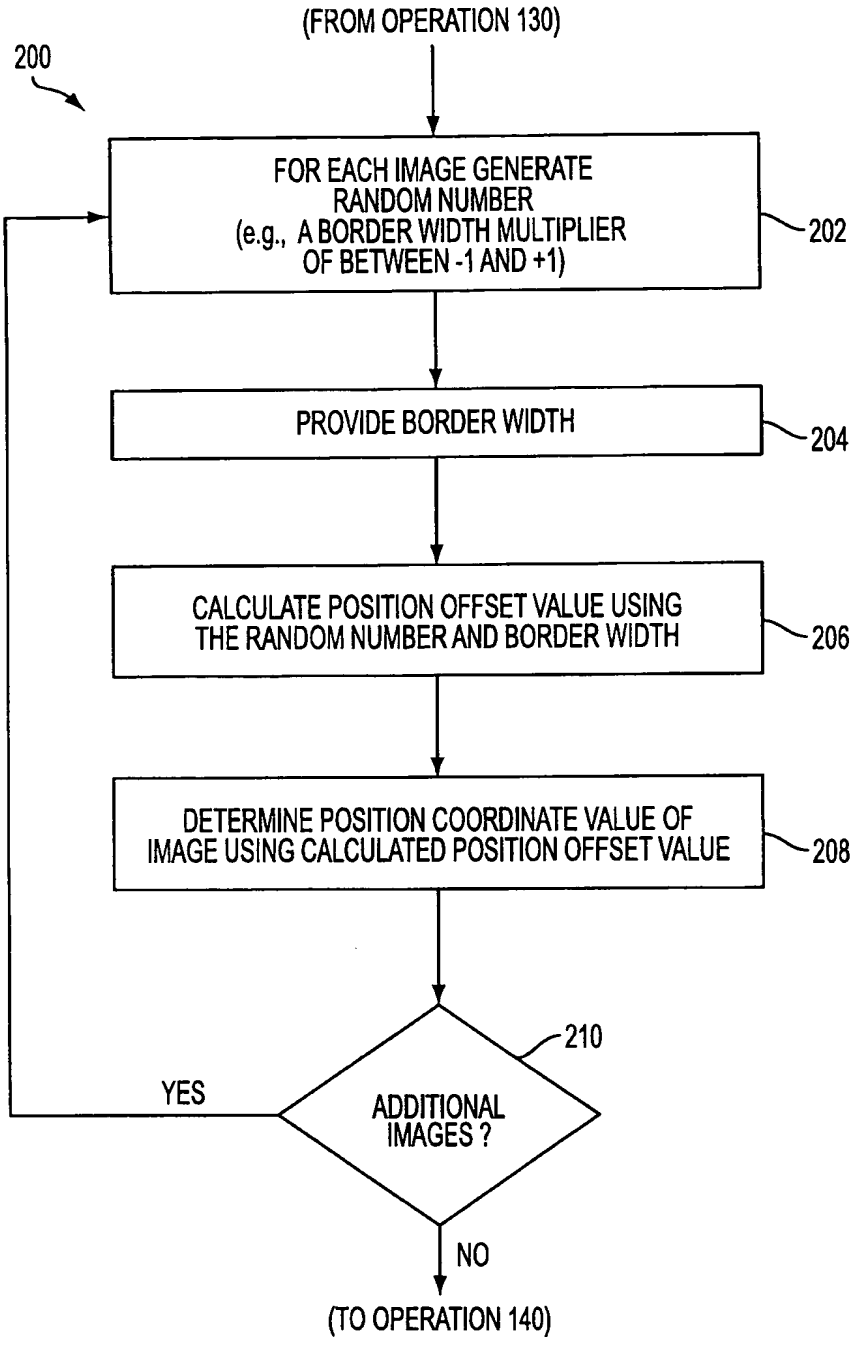
(FROM OPERATION 130)
200
FOR EACH IMAGE GENERATE RANDOM NUMBER (e.g., A BORDER WIDTH MULTIPLIER OF BETWEEN -1 AND +1)
202
PROVIDE BORDER WIDTH
204
CALCULATE POSITION OFFSET VALUE USING THE RANDOM NUMBER AND BORDER WIDTH
206
DETERMINE POSITION COORDINATE VALUE OF IMAGE USING CALCULATED POSITION OFFSET VALUE
208
210
ADDITIONAL IMAGES ?
YES
NO
(TO OPERATION 140)

FIG. 2

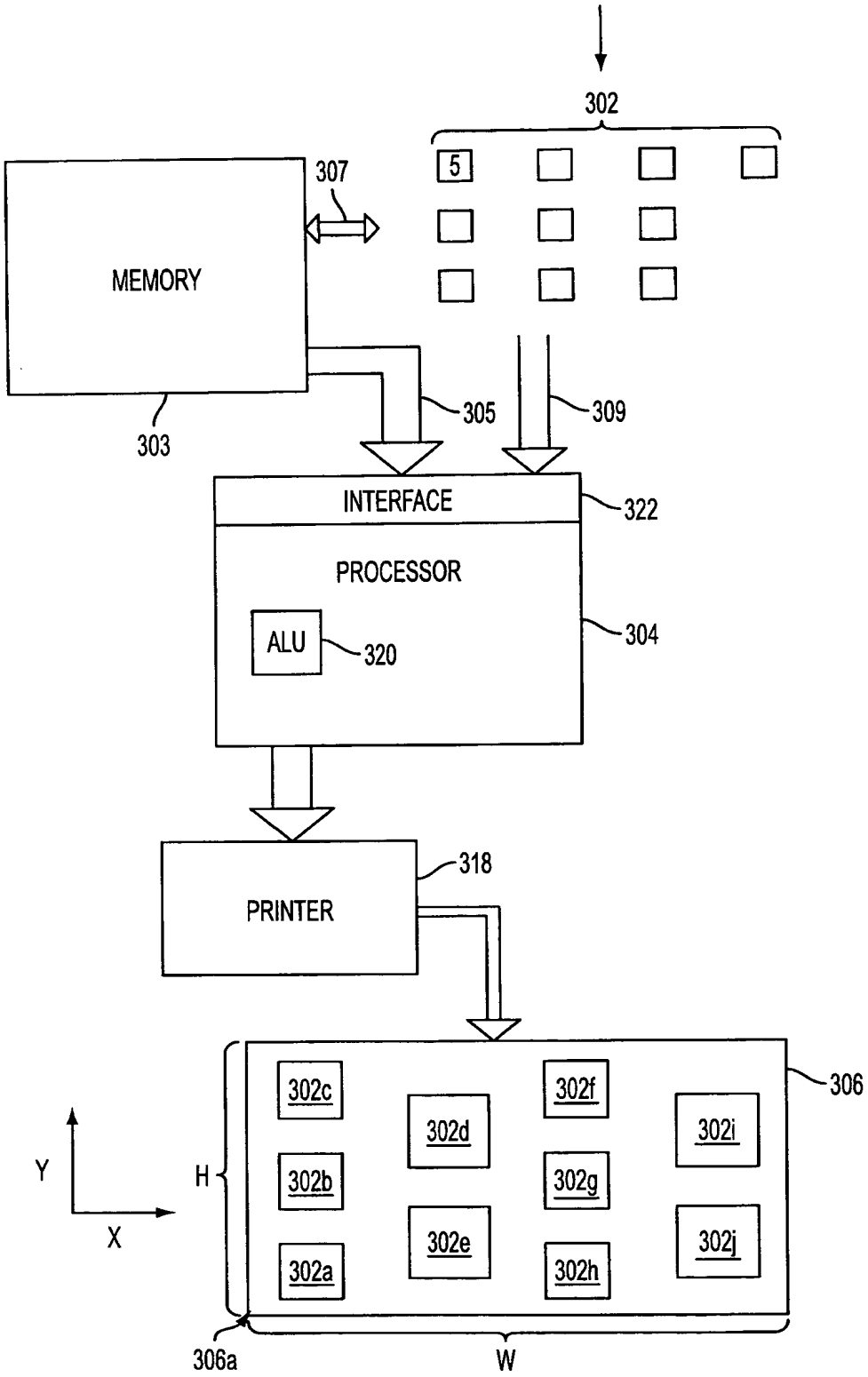
302
5
307
MEMORY
303
305
309
INTERFACE
322
PROCESSOR
ALU
320
304
318
PRINTER
306
302c
302d
302f
302i
302b
302g
302e
302j
302a
302h
Y
X
H
306a
W

FIG. 3